



JAPANESE
INDUSTRIAL
STANDARD

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JIS H 1665 : 2006

**Methods for determination of oxygen in
zirconium and zirconium alloys**
(Amendment 1)

JIS H 1665:1988 has been revised under date of February 20, 2006. The revised items are included in this Amendment 1.

ICS 77.120.99

Reference number : JIS H 1665 : 2006 (E)

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law. Consequently, **JIS H 1665:1988** is revised, with a part of it replaced with this Amendment.

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Methods for determination of oxygen in zirconium and zirconium alloys (Amendment 1)

JIS H 1665:1988 is revised as follows.

6.3 (Apparatus) Replace (b)(Carbon Dioxide Absorption Tube) with the following:

(b) **Carbon Dioxide Absorption Tube** A glass tube packed by soda lime or sodium hydroxide.

7.3.2 [Apparatus using Nitrogen and Infrared Detector for Carbon Monoxide (Attached Figure 4)] Replace (b) (Cyan Absorption Tube) of (3) (Extraction Gas Refining Part) with the following:

(b) **Cyan Absorption Tube** A glass tube packed by soda lime or sodium hydroxide.

Errata for JIS (English edition) are printed in *Standardization Journal*, published monthly by the Japanese Standards Association, and also provided to subscribers of JIS (English edition) in *Monthly Information*.

Errata will be provided upon request, please contact:
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Oxygen in Zirconium
and Zirconium Alloys**

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JAPANESE INDUSTRIAL STANDARD

J I S

Methods for Determination of Oxygen in
Zirconium and Zirconium Alloys

H 1665-1988

1. Scope

This Japanese Industrial Standard specifies the methods for determination of oxygen in zirconium and zirconium alloys.

2. General Matters

General matters common to the methods for chemical analysis shall be in accordance with JIS H 1650 and JIS Z 2613.

3. Classification of Methods

The method for determination of oxygen shall be in accordance with either one of the following methods:

- (1) Vacuum Fusion - Constant Volume Monometric Method This method applies to the sample of 0.005 wt % and over to 0.2 wt % excl. in oxygen content.
- (2) Inert Gas Fusion - Gas Chromatography This method applies to the sample of 0.005 wt % and over to 0.2 wt % excl. in oxygen content.
- (3) Inert Gas Fusion - Infrared Absorption Method This method applies to the sample of 0.005 wt % and over to 0.2 wt % excl. in oxygen content.

4. Preparation of Sample

A sample shall be prepared in accordance with 4.4.1 (1) of JIS Z 2613 or chemical polishing. In the case of execution of chemical polishing, after dipping a sample into the mixed solution of 100 ml nitric acid (1+1) and 5 ml hydrofluoric acid, it is successively cleaned with water, ethanol, and acetone each one minute by using an ultrasonic cleaner to be dried by sending air.

Applicable Standards:

JIS H 1650-General Rules for Chemical Analysis of Zirconium and
Zirconium Alloys

JIS Z 2613-General Rules for Determination of Oxygen in Metallic
Materials